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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.         | CONFIRMATION NO. |
|---|-------------|----------------------|-----------------------------|------------------|
| 10/668,972  | 09/24/2003  | A. Ben-Nakhi         | 3216/2                      | 1460             |
| 23338   | 7590        | 11/07/2005           |                             |                  |
| DENNISON, SCHULTZ, DOUGHERTY & MACDONALD<br>1727 KING STREET<br>SUITE 105<br>ALEXANDRIA, VA 22314 |             |                      | EXAMINER<br>TANNER, HARRY B |                  |
|   |             |                      | ART UNIT                    | PAPER NUMBER     |
|   |             |                      | 3744                        |                  |

DATE MAILED: 11/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                                      |   |  |
|------------------------------|--------------------------------------|---|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/668,972 | <b>Applicant(s)</b><br>BEN-NAKHI ET AL. |  |
|                              | <b>Examiner</b><br>Harry B. Tanner   | <b>Art Unit</b><br>3744                 |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>9/24/03</u> . | 6) <input type="checkbox"/> Other: ____.  |

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The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5, 7-10 and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Carlson. Carlson discloses a method and apparatus for diagnosing problems of an air conditioning system using a portable monitoring system (see col. 7, lines 55-58) in which actual as well as normal system operation can be concurrently displayed graphically such as with a pressure-enthalpy diagram (see col. 6, lines 10-53) as well as determining other characteristics such as coefficient of performance (see col. 6, lines 6-9). It is inherent in the system of Carlson that the microprocessor will be operatively connected to memory for storing the characteristics of the refrigerant and the normal operation data of the system supplied by the manufacturer.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 6 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carlson as applied to claim 1 above and further in view of Tulpule. Tulpule teaches the use of neural networks in order to improve the monitoring of a refrigeration system operation (see col. 2, lines 2-63). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the system of Carlson such

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that it included the use of neural networks in order to improve the monitoring of the refrigeration system operation in view of the teachings of Tulpule.

Claims 11-12 and 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Carlson as applied to claim 1 above and further in view of Hildebrand et al. Hildebrand teaches the anticipation of potential air-conditioning system malfunctions (see col. 1, lines 42-57). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the system of Carlson such that it included the anticipation of potential air-conditioning system malfunctions in view of the teachings of Hildebrand.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Harry B. Tanner whose telephone number is (571) 272-4813. The examiner can normally be reached 8:30 am to 5:00 pm Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Melba Bumgarner, can be reached on (571) 272-4709. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://portal.uspto.gov/external/portal/pair>.

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Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read "Harry B. Tanner". The signature is fluid and cursive, with the first name "Harry" being more prominent than the last name "Tanner".

Harry B. Tanner  
Primary Examiner  
Art Unit 3744